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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/587,741

07/27/2006

Remo Meister

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EXAMINER

RAHIM, AZIM

ART UNIT

PAPER NUMBER

3744

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/587,741	<b>Applicant(s)</b> MEISTER, REMO	
	<b>Examiner</b> AZIM RAHIM	<b>Art Unit</b> 3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 22-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 22-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 July 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/29/2009 &amp; 11/13/2006</u> . | 6) <input type="checkbox"/> Other: _____  |

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## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of Species 1 directed to figure 1 in the reply filed on 7/10/2009 is acknowledged. The traversal is on the ground(s) that no serious burden exists on the Examiner by examining all of the disclosed solutions for monitoring refrigerant temperatures and examining a single monitoring solution (i.e., the monitoring solution of Fig. 1).. This is not found persuasive because the only proper traversal to an Election of Species Requirement is to state on the record that the Figures are NOT patentably distinct. Absent such an admission, the election of species requirement is deemed PROPER.

The requirement is still deemed proper and is therefore made FINAL.

### ***Drawings***

2. The drawings are objected to under 37 CFR 1.83(b) because they are incomplete. 37 CFR 1.83(b) reads as follows:

When the invention consists of an improvement on an old machine the drawing must when possible exhibit, in one or more views, the improved portion itself, disconnected from the old structure, and also in another view, so much only of the old structure as will suffice to show the connection of the invention therewith.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure

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must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance. In regard to the drawings, the drawings do not appear to be complete to enable one of ordinary skill in the art to make or use the invention.

### ***Specification***

3. The disclosure is objected to under 37 CFR 1.71, as being so incomprehensible as to preclude a reasonable search of the prior art by the examiner. For example, the following items are not understood: On page 2, lines 26-34, the dry expansion system is referred to as (6) and (1), which does not appear to correspond to the drawings (i.e. elected figure 1), and the same applies to the two-stage evaporation system (6) (1+2). Also, the remainder of the specification is replete with errors of the like and other errors of the reference numbers not mentioned or matching up to the drawings. Furthermore, the Applicant should be careful not to introduce any new matter into the disclosure (i.e., matter which is not supported by the disclosure as originally filed).

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4. A substitute specification including the claims is required pursuant to 37 CFR 1.125(a) because the specification and the claims appear to be a machine translation and is difficult for the Examiner to understand.

5. A substitute specification in proper idiomatic English and in compliance with 37 CFR 1.52(a) and (b) is required. The substitute specification filed must be accompanied by a statement that it contains no new matter.

6. A substitute specification must not contain new matter. The substitute specification must be submitted with markings showing all the changes relative to the immediate prior version of the specification of record. The text of any added subject matter must be shown by underlining the added text. The text of any deleted matter must be shown by strike-through except that double brackets placed before and after the deleted characters may be used to show deletion of five or fewer consecutive characters. The text of any deleted subject matter must be shown by being placed within double brackets if strike-through cannot be easily perceived. An accompanying clean version (without markings) and a statement that the substitute specification contains no new matter must also be supplied. Numbering the paragraphs of the specification of record is not considered a change that must be shown.

### ***Claim Objections***

7. Claims 1-13 and 22-26 are objected to because of the following informalities: Regarding claim 1, in lines 3-4, the recitation “the refrigerating liquid” should be corrected to recite --a refrigerant liquid--; also, the recitation “the injection valve” should be corrected to recite --an injection valve. Regarding claim 2, in line 4, the recitations “the suction vapor pressure” and

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“the condenser” should be corrected to recite --a suction vapor pressure-- and --a condenser-- respectively. Please see the remainder of the claims for similar errors. Regarding claim 3, in lines 4-5, the recitations "IHE (internal heat exchanger) (first and/or second stage)" and “two-stage evaporator (TSE)” should be recited as --internal heat exchanger-- and --two-stage evaporator-- respectively, since the parenthesis “( )” are reserved for reference numbers and abbreviations cannot be recited in the claims; Also, see the remainder of the claims (see claims 4-7 and 13) for similar errors pertaining to the abbreviations. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 1-13 and 22-26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Regarding claim 1, the limitation "whereby stable conditions in the controlling and refrigeration circuit are achieved by keeping the temperature of the refrigerant liquid upstream of the injection valve constant" does not enable one of ordinary skill in the art to make or use the invention. Please see the dependant claims for similar enablement issues.

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 1-13 and 22-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Regarding claim 1, the limitation “whereby stable conditions in the controlling and refrigeration circuit are achieved by keeping the temperature of the refrigerant liquid upstream of the injection valve constant” is unclear, in context, since it is not entirely clear as to how the temperature upstream of the injection valve are kept constant. For examination purposes, the aforementioned limitation will be interpreted as best understood. Regarding claim 2, the limitation “whereby the suction vapor pressure upstream of the condenser is kept constant” is unclear, in context, since it is not entirely clear as to how the suction vapor pressure is kept constant. For examination purposes, the aforementioned limitation will be interpreted as best understood. Regarding claim 2, the limitation “whereby the refrigerant level in the heat exchanger, where the liquid refrigerant is completely evaporated, is defined and controlled by a level control at the evaporator, the IHE (internal heat exchanger) or the two-stage evaporator (TSE) (first and/or second stage) or suitable reference value, whereby the degree of filling of the evaporator with the liquid refrigerant, and as a result the suction vapor temperature is defined” is unclear, in context, since it is not entirely clear as to how the refrigerant liquid in the evaporator is controlled, whether the refrigerant level is controlled by all or one of the IHE (internal heat exchanger) or the two-stage evaporator (TSE) (first and/or second stage) or suitable reference value, and what the details pertaining to the suitable reference value. For examination purposes, the aforementioned limitation will be interpreted as best understood. Please see the remainder of the claims for similar indefinite issues.

***Claim Rejections - 35 USC § 102***

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 1-13 and 22-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Kantchev (US 6,216,481).

Regarding claims 1-13, 22 and 23, Kantchev discloses a refrigeration system (referring to figure 3) capable of performing a method comprising: utilizing pressure regulating valves (42 and 43) along with and in combination with a pair of condensers (78 and 104), a suction line (62 and 38) an evaporator (98), a sub cooler (28), an accumulator (62) and a plurality of compressors (32, 34 and 36) to maintain the suction pressure of the compressors constant, thus maintaining the temperature of the refrigerant upstream of a pair of expansion valves (68 and 98) constant (see column 4, lines 38-44; temperature changes with a change in pressure). In addition, Kantchev further teaches that the liquid level of the refrigerant residing within the evaporator is controlled by either the expansion valve (98) alone and/or in combination with solenoid valves (66 and 86), and that suction vapor bypasses the plurality of compressors (illustrated in figure 1).

Regarding claim 24, Kantchev further discloses that additional refrigerant from a reclaim condenser (48) is introduced into the suction line via the accumulator (illustrated in figure 3).

Regarding claims 25 and 26, Kantchev further discloses (referring to figure 3) that the evaporator is disposed between the liquid line (96) and the secondary medium flow line (28).



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***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AZIM RAHIM whose telephone number is (571) 270-1998. The examiner can normally be reached on Monday - Thursday 7am - 2pm EST and Friday 7am - 11am EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frantz Jules or Cheryl Tyler can be reached on 571-272-6681 and 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. R./

Examiner, Art Unit 3744

1/16/2010

/Frantz F. Jules/

Supervisory Patent Examiner, Art Unit 3744